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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PHUONG, DAI	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.**	**Applicant(s)**
	10/675,608	FARCHMIN ET AL.
	Examiner	**Art Unit**
	Dai A. Phuong	2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 25 May 2006.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 53-92 and 96-107 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 53-56,58-70,72-92,96,97 and 100-106 is/are rejected.

7)☒ Claim(s) 57,71,98,99 and 107 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 30 September 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments filed 06/02/2006 have been fully considered but they are not persuasive. Claims 53-92 and 96-107 are currently pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 53-56, 58-70, 72-81, 87-92, 100-104 and 106 are rejected under 35 U.S.C. 102(e) as being anticipated by Fullerton et al. (Pub. No: 20030197643).

Regarding claim 53, Fullerton et al. disclose a method for use with a portable wireless information device (WID) within a space, the WID including a transmitter for transmitting wireless WID signals, the method comprising the steps of: obtaining position information indicative of the distances of signal paths between the WID and specific locations within the space (fig. 11 and fig. 12A, [0038] to [0040] and fig. 13[0115] to [0117]); using a first sub-set of the position information to identify a first estimate of WID location (fig. 11 and fig. 12A, [0038] to [0040] and fig. 13[0115] to [0117]); using a second sub-set of the position information to identify a second estimate of WID position (fig. 11 and fig. 12A, [0038] to [0040]); and using the first and second estimates to identifying a final estimate of the WID location (fig. 11 and fig. 12A, [0038] to [0040] and fig. 13[0115] to [0117]).

Regarding claim 54, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the step of using the first and second estimates includes generating a confidence factor for each of the estimates where the confidence factors are indicative of the accuracy of the estimates ([0110]).

Regarding claim 55, Fullerton et al. disclose the method all the limitations in claim 54. Further, Fullerton et al. disclose the method wherein the step of using the first and second estimates further includes identifying the estimate having the highest confidence factor as the final estimate ([0110] to [0112]).

Regarding claim 56, Fullerton et al. disclose the method all the limitations in claim 54. Further, Fullerton et al. disclose the method further including the step of identifying first and second regions within the space that are associated with the first and second information sub-sets ([0115] and [0116]) and wherein the step of generating confidence factors includes determining relative juxtapositions between the estimates and the first and second regions ([0110] to [0112]).

Regarding claim 58, Fullerton et al. disclose the method all the limitations in claim 54. Further, Fullerton et al. disclose the method wherein the step of using the first and second estimates further includes mathematically combining the first and second estimates to provide a final estimate of WID location as a function of the confidence factors ([0109] to [0112]).

Regarding claim 59, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method further including rendering at least one of the estimates accessible to applications requiring WID position estimates ([0039]).

Regarding claim 60, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the step of obtaining includes providing a

separate wireless signal receiver at each of the specific locations, receiving signals from the WID and using the signals to identify the position information ([0039]).

Regarding claim 61, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the position information includes signal strength information ([0118]) and wherein the step of using the signals includes determining the signal strengths ([0118]).

Regarding claim 62, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the step of obtaining includes providing a separate wireless signal transmitter at each of the specific locations ([0012]) and at least one receiver within the space, transmitting signals from the transmitters to the WID, identifying the position information via the WID ([0105]-[0106]) and transmitting the position information from the WID to the at least one receiver ([0106] and [0110] to [0112]).

Regarding claim 63, Fullerton et al. disclose the method all the limitations in claim 62. Further, Fullerton et al. disclose the method wherein the position information is signal strength information ([0118]).

Regarding claim 64, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method (wherein first and second facility regions are associated with the first and second position information sub-sets and wherein the first and second regions overlap ([0008] and [0105] to [0106]).

Regarding claim 65, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method further including the step of using N-2 additional sub-sets of the position information to identify N-2 additional estimates of WID position wherein

the step of using the first and second estimates to identify a final estimate of the WID position includes using a sub-set of the first through Nth estimates to identify a final estimate of the WID location (fig. 13 and fig. 15, [0115] to [0119]).

Regarding claim 66, Fullerton et al. disclose the method all the limitations in claim 65. Further, Fullerton et al. disclose the method wherein the subset of estimates includes all of the first through Nth estimates (fig. 13 and fig. 15, [0115] to [0119]).

Regarding claim 67, Fullerton et al. disclose the method all the limitations in claim 66. Further, Fullerton et al. disclose the method wherein the step of using the first through Nth estimates includes identifying a confidence factor for each of the N estimates (fig. 13 and fig. 15, [0109] to [0110] and [0115] to [0119]).

Regarding claim 68, Fullerton et al. disclose the method all the limitations in claim 67. Further, Fullerton et al. disclose the method wherein the step of using the first through Nth estimates further includes identifying the estimate having the highest confidence factor as the final estimate ([0109] to [0110]).

Regarding claim 69, Fullerton et al. disclose the method all the limitations in claim 67. Further, Fullerton et al. disclose the method further including the step of identifying N regions within the space that are associated with the first through Nth information sub-sets and wherein the step of generating confidence factors includes determining relative juxtapositions between the estimates and the first through Nth regions (fig. 13 and fig. 15, [0109] to [0110] and [0115] to [0119]).

Regarding claim 70, Fullerton et al. disclose the method all the limitations in claim 69. Further, Fullerton et al. disclose the method wherein the step of identifying N regions includes

identifying regions such that each location within the space is located within at least two separate regions (fig. 13 and fig. 15, [0115] to [0116]).

Regarding claim 72, Fullerton et al. disclose the method all the limitations in claim 67. Further, Fullerton et al. disclose the method wherein the step of using the first though Nth estimates further includes mathematically combining at least a sub-set of the first through Nth estimates to provide a final estimate of WID location as a function of the confidence factors ([0109] to [0110]).

Regarding claim 73, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the steps of using the first and second sub-sets of position information include providing a single processor running first and second programs to determine the first and second locations, respectively (fig. 9 and fig. 10, [0012] to [0014] and [0097] to [0106]).

Regarding claim 74, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the steps of using the first and second sub-sets of position information include providing first and second processors running the first and second programs to determine the first and second locations, respectively (fig. 9 and fig. 10, [0012] to [0014] and [0097] to [0106]).

Regarding claim 75, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method further including the step of identifying first and second regions within the space that are associated with the first and second information sub-sets and wherein the first and second regions at least in part overlap ([0012] to [0014]).

Regarding claim 76, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the step of using a first sub-set includes running a first program to estimate WID position and the step of using a second sub-set includes running a second program to estimate WID position ([0013]).

Regarding claim 77, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the first and second programs are different ([0012] and [0013]).

Regarding claim 78, Fullerton et al. disclose the method all the limitations in claim 77. Further, Fullerton et al. disclose the method wherein the first and second sub-sets are identical ([0115] and [0116]).

Regarding claim 79, Fullerton et al. disclose the method all the limitations in claim 77. Further, Fullerton et al. disclose the method wherein the first and second sub-sets are different ([0012] and [0013]).

Regarding claim 80, Fullerton et al. disclose the method all the limitations in claim 76. Further, Fullerton et al. disclose the method wherein at least the first program includes at least first and second algorithms that are performed as a function of general WID location ([0038] to [0040]. Inherently, the system includes the necessary software, hardware, firmware or a combination thereof to accomplish the stated task or functionality.)

Regarding claim 81, Fullerton et al. disclose the method all the limitations in claim 53. Further, Fullerton et al. disclose the method wherein the space is a three dimensional space within an automated facility ([0005]-[0008] and [0115] to [0119]).

Regarding claim 87, Fullerton et al. disclose a method for use with a portable wireless information device (WID) within a space, the WID including a transmitter for transmitting wireless WID signals, the method for tracking location of the WID within the space and comprising the steps of: tracking WID location with a first wireless position estimating system to generate a first position estimate (fig. 11 and fig. 13, [0106] to [0112] and [0115] to [0116]); tracking WID location with a second wireless position estimating system to generate a second position estimate (fig. 11 and fig. 13, [0106] to [0112] and [0115] to [0116]); and using the first and second estimates to identifying a final WID position estimate (fig. 11 and fig. 13, [0106] to [0112] and [0115] to [0116]).

Regarding claim 88, Fullerton et al. disclose the method all the limitations in claim 87. Further, Fullerton et al. disclose the method wherein each of the tracking steps includes providing receivers at spaced apart specific locations within the space, receiving wireless signals transmitted by the WID and determining a location related characteristic of the received signals that is indicative of the distances of signal paths between the WID and specific locations of the receivers (fig. 11 and fig. 13, [0106] to [0112] and [0115] to [0116]), the step of tracking WID location with the first system further including using a sub-set of the location related characteristics to generate the first position estimate and the step of tracking WID location with the second system further including using a sub-set of the location related characteristics to generate the second position estimate (fig. 11 and fig. 13, [0106] to [0112] and [0115] to [0116]).

Regarding claim 89, Fullerton et al. disclose the method all the limitations in claim 88. Further, Fullerton et al. disclose the method wherein the location related characteristics includes signal strength ([0118]).

Regarding claim 90, Fullerton et al. disclose the method all the limitations in claim 87. Further, Fullerton et al. disclose the method wherein the step of using the first and second estimates to identifying a final WID position estimate includes identifying the most accurate estimate of the first and second estimates as the final estimate ([0109] to [0110]).

Regarding claim 91, Fullerton et al. disclose the method all the limitations in claim 87. Further, Fullerton et al. disclose the method wherein the space is an enclosed space within a facility ([0008]).

Regarding claim 92, Fullerton et al. disclose the method all the limitations in claim 87. Further, Fullerton et al. disclose the method wherein the first and second estimating systems use different algorithms to estimate WID position ([0012] to [0014]).

Regarding claim 100, Fullerton et al. disclose a method for estimating the position of a wireless information device (WID) within a space, the method comprising the steps of: a) generating a first WID position estimate via a first estimating program ([0038] to [0040]); b) generating a second WID position estimate via a second estimating program ([0038] to [0040]); and c) using the first and second estimates to identify a final WID position estimate ([0038] to [0040]).

Regarding claim 101, Fullerton et al. disclose the method all the limitations in claim 100. Further, Fullerton et al. disclose the method wherein the first and second estimating programs are different ([0112] to [0014]).

Regarding claim 102, Fullerton et al. disclose the method all the limitations in claim 103. Further, Fullerton et al. disclose the method further including the step of generating a confidence

factor for each of the first and second estimates and wherein the step of using the first and second estimates includes using to confidence factors ([0109] to [0110]).

Regarding claim 103, Fullerton et al. disclose the method all the limitations in claim 102. Further, Fullerton et al. disclose the method wherein the step of using the confidence factors includes mathematically combining the first and second estimates as a function of the confidence factors ([0109] to [0112]).

Regarding claim 104, Fullerton et al. disclose the method all the limitations in claim 102. Further, Fullerton et al. disclose the method wherein the step of using the confidence factors includes the step of selecting the one of the first and second estimates that is associated with the highest confidence factor as the final estimate ([0110] to [0112] and [0116]).

Regarding claim 106, Fullerton et al. disclose the method all the limitations in claim 104. Further, Fullerton et al. disclose the method wherein the step of performing another function includes indicating that the WID position is unknown ([0115] and [0116]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 82-86, 96-97 and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fullerton et al. (Pub. No: 20030197643) in view of McCrady et al. (U.S. 6453168).

Regarding claim 82, Fullerton et al. disclose a method for use with a portable wireless information device (WID) within a space, the WID including a transmitter for transmitting wireless WID signals, the method for tracking the position of the WID within the space and comprising the steps of: obtaining position information indicative of the distances of signal paths between the WID and specific locations within the space ([0038]-[0040]); attempting to use a first sub-set of the position information to identify a first estimate of WID location ([0038]-[0040]); attempting to use a second sub-set of the position information to identify a second estimate of the WID location; when one of the first and second estimates is identified, rendering the one of the first and second estimates accessible by applications requiring WID location ([0038]-[0040]).

However, Fullerton et al. do not disclose when the one of the first and second estimates is not identified and the other of the first and second estimates is identified, rendering the other of the first and second estimates accessible by applications requiring WID location.

In the same field of endeavor, McCrady et al. disclose when the one of the first and second estimates is not identified and the other of the first and second estimates is identified, rendering the other of the first and second estimates accessible by applications requiring WID location (fig. 1, col. 16, lines 28-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the impulse radio of Fullerton et al. by specifically including disclose when the one of the first and second estimates is not identified and the other of the first and second estimates is identified, rendering the other of the first and second estimates accessible

by applications requiring WID location, as taught by McCrady et al., the motivation being in order to minimize the effects of multi-path interference on TOA estimates.

Regarding claim 83, the combination of Fullerton et al. and McCrady et al. disclose all the limitations in claim 82. Further, Fullerton et al. disclose the method further including the step of, when both the first and second estimates are identified, identifying a confidence factor for each of the first and second estimates where the confidence factors are indicative of the accuracy of the estimates and identifying the estimate associated with the greatest confidence factor as a final estimate to be rendered accessible ([0106]-[0112]).

Regarding claim 84, the combination of Fullerton et al. and McCrady et al. disclose all the limitations in claim 82. Further, Fullerton et al. disclose the method wherein the position information includes signal strength information ([0118]).

Regarding claim 85, the combination of Fullerton et al. and McCrady et al. disclose all the limitations in claim 82. Further, Fullerton et al. disclose the method wherein the step of obtaining includes providing a separate wireless signal receiver at each of the specific locations, receiving signals from the WID and using the signals to identify the position information ([0038] to [0040] and [0115] to [0116]).

Regarding claim 86, the combination of Fullerton et al. and McCrady et al. disclose all the limitations in claim 82. Further, Fullerton et al. disclose the method wherein the step of obtaining includes providing a separate wireless signal transmitter at each of the specific locations, transmitting signals from the transmitters to the WID, identifying the position information via the WID and transmitting the position information from the WID to the at least a first receiver ([0038] to [0040] and [0115] to [0116]).

Regarding claim 96, Fullerton et al. disclose a method for estimating the position of a wireless information device (WID) within a space, the method comprising the steps of: a) estimating WID position via a first estimating program ([0109] to [0110] and [0116]); b) identifying a confidence factor for the WID position estimate ([0109] to [0110] and [0116]); c) when the confidence factor meets a threshold requirement, rendering the position estimate accessible to other applications ([0109] to [0110] and [0116]).

However, Fullerton et al. do not disclose when the confidence factor fails to meet a threshold requirement, repeating steps (a) through (c) with a second estimating program.

In the same field of endeavor, McCrady et al. disclose when the confidence factor fails to meet a threshold requirement, repeating steps (a) through (c) with a second estimating program (fig. 1, col. 16, lines 28-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the impulse radio of Fullerton et al. by specifically including when the confidence factor fails to meet a threshold requirement, repeating steps (a) through (c) with a second estimating program, as taught by McCrady et al., the motivation being in order to minimize the effects of multi-path interference on TOA estimates.

Regarding claim 97, the combination of Fullerton et al. and McCrady et al. disclose all the limitations in claim 96. Further, McCrady et al. disclose the method wherein step (d) is performed for each of a plurality of estimating programs until one of WID position has been estimated at least once via each of the estimating programs and an estimate that meets the threshold requirement has been identified (fig. 1, col. 16, lines 28-63).

Regarding claim 105, Fullerton et al. disclose a method for use with a portable wireless information device (WID) within a space, the WID including a transmitter for transmitting wireless WID signals, the method for tracking the position of the WID within the space and comprising the steps of: obtaining position information indicative of the distances of signal paths between the WID and specific locations within the space ([0038] to [0040] and [0105] to [0110]); attempting to use a first sub-set of the position information to identify a first estimate of WID location ([0038] to [0040] and [0105] to [0110]); attempting to use a second sub-set of the position information to identify a second estimate of the WID location ([0038] to [0040] and [0105] to [0110]); determining if at least one of the estimates is sufficiently accurate ([0109] to [0110]); when at least one of the estimates is sufficiently accurate, rendering the likely most accurate of the estimates accessible as the final estimate ([0109] to [0112]). However, Fullerton et al. do not disclose when none of the estimates is sufficiently accurate, performing another function.

In the same field of endeavor, McCrady et al. disclose when none of the estimates is sufficiently accurate, performing another function (fig. 1, col. 16, lines 28-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the impulse radio of Fullerton et al. by specifically including when none of the estimates is sufficiently accurate, performing another function, as taught by McCrady et al., the motivation being in order to minimize the effects of multi-path interference on TOA estimates.

Reasons Subject Matter

6. Claims 57, 71, 98-99 and 107 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 99 is dependent on claim 98.

Regarding claim 57, the prior art record does not disclose nor fairly suggest the method wherein *the first and second regions include first and second central locations, respectively, and, wherein, the step of determining relative juxtapositions includes comparing the estimated locations to the first and second central locations.*

Regarding claim 71, the prior art record does not disclose nor fairly suggest the method *wherein the first through Nth regions include first through Nth central locations, respectively, and, wherein, the step of determining relative juxtapositions includes comparing the estimated positions to the first through Nth central locations.*

Regarding claim 98, the prior art record does not disclose nor fairly suggest the method **wherein, after WID position has been estimated via each of the estimating programs, when none of the estimates meets the threshold requirement, the method includes the step of performing another function.**

Regarding claim 107, the prior art record does not disclose nor fairly suggest the method *wherein the step of determining if at least one of the estimates is sufficiently accurate includes generating a confidence factor for each of the estimates and comparing the confidence factor to a threshold factor and, when a confidence factor is greater than the threshold factor, determining that the associated estimate is sufficiently accurate.*

Response to Argument

Applicant, on page 16 of his response with respect to claim 53, argues that Fullerton fails to teach or suggest generating first and second position estimates. However, the Examiner disagrees. Fullerton discloses that using a first sub-set of the position information (x1, y1) of the first impulse radio 1304 to ***identify a location of third impulse radio 1312 (x3, y3)*** from the first impulse radio 1304 ***(distance d2)***; and using a second sub-set of the position information (x2, y2) of the second impulse radio 1308 to ***identify a location of third impulse radio 1312 (x3, y3)*** from the second impulse radio 1308 ***(distance d3)***; and finally the position of third impulse radio 1312 (x3, y3) is calculated from the first information location, d2 and the second location information d3 using a triangulation method. The applicant's attention is directed to the disclosure of the reference Fullerton et al., in Figure 13, from paragraph [0115] to paragraph [0117].

Applicant, on page 17 of his response with respect to claim 54, argues of the first and second estimates. The portion of Fullerton cited in the Office Action as teaching confidence factors (i.e.. paragraph 110) has nothing to do with confidence factors. A confidence factor is a factor that indicates likelihood that an estimate is accurate (see last two sentences in paragraph 13 of the present specification). Fullerton's paragraph 110 describes a correction factor, not a confidence factor. Applicant argues a particular meaning for certain words recited in the claims, e.g. "confidence factor".

In response, during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims

during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550- 51 (CCPA 1969). The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). See MPEP 2111.

The language used by Applicant is broad enough as explained in previous Office Action (mailed 02/23/2006).

Applicant, on page 20 of his response with respect to claim 82, argues that Fullerton fails to teach or suggest generating first and second position estimates. However, the Examiner disagrees. Fullerton discloses that using a first sub-set of the position information (x1, y1) of the first impulse radio 1304 to ***identify a location of third impulse radio 1312 (x3, y3)*** from the first impulse radio 1304 ***(distance d2)***; and using a second sub-set of the position information (x2, y2) of the second impulse radio 1308 to ***identify a location of third impulse radio 1312 (x3, y3)*** from the second impulse radio 1308 ***(distance d3)***; and finally the position of third impulse radio 1312 (x3, y3) is calculated from the first information location, d2 and the second location information d3 using a triangulation method. The applicant's attention is directed to the disclosure of the reference Fullerton et al., in Figure 13, from paragraph [0115] to paragraph [0117].

Applicant, on pages 20 to page 21 of his response, argues McCrady fails to teach what Fullerton lacks. No part of McCrady teaches or suggests identifying or attempting to identify two position estimates and therefore, not surprisingly, the McCrady specification, including portion cited as relevant to claim 82 (i.e., col. 16, lines 28-50), does not teach a preferred estimate

hierarchy or, more generally, that when one estimate is identified and the other is not identified, rendering the identified estimate accessible to applications. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dai A Phuong whose telephone number is 571-272-7896. The examiner can normally be reached on Monday to Friday, 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen M Duc can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-7503.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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